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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hakan Engqvist

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2895

466

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YOUNG & THOMPSON

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EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

10/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,084	Applicant(s) ENGQVIST ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,40-44,46,48-53 and 56-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,40,41,43 and 46 is/are rejected.
- 7) ☒ Claim(s) 4,5,42,44, 48-53 and 56-59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/14/09</u> . | 6) <input type="checkbox"/> Other: _____ |

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This action is in response to applicants' amendment of 6 July 2009. The amendments to the specification have overcome the objections to the specification for failing to provide proper antecedent basis for claims 3, 50, 56 and 58. The amendments to the claims have overcome the 35 USC 112 rejections. Applicant's arguments with respect to the remaining rejection and objection have been fully considered but they are not persuasive.

WO 99/48809; WO 94/02411 and DE 4303575, cited in the information disclosure statement of 14 May 2009 have been considered with respect to the provided abstract.

The disclosure is objected to because of the following informalities: In the amendment to the paragraph beginning on page 5, line 20, all occurrences of "phosphor" should be changed to "phosphorous" as was done in the amendment of 22 June 2008. The added subject matter to the paragraph beginning on 8, line 9 states hydro-ammonium phosphate is a phosphate ion. This is incorrect. Hydro-ammonium phosphate is a water soluble phosphate comprising phosphate ions. In addition, this added section teaches "other phosphor-containing ions". It is unclear what is meant by this phrase since phosphors are, by definition, phosphorescent materials, not ions. It is noted that claim 56, from which the added subject matter is based, teaches that the phosphate ions can be other phosphorous-containing ions. Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The subject matter of claim 4 is not found in the specification. The specification teaches that the liquid has a pH of at least 7. The specification is silent as to the pH of the system.

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Applicants argue that the amendment to the specification has overcome this objection and that the teachings on page 9, lines 3-4 clearly relate to the system. These lines and the added amendment are under a section titled "The hydration liquid". Thus it is clear that these lines and the amendment refer to the liquid; not the system, which is a combination of the liquid and the powdered component. Applicants argue that original claim 1 teaches the presence of buffer that is present in the powder or liquid. The arguments with respect to what is taught in the original claims is immaterial to this objection since the objection is that the specification does not provide proper antecedent basis for the claimed subject matter. The specification, while discussing the use of buffering systems in the cement system on pages 4 and 5, do not discuss the pH of the system. The objection is maintained.

Claims 1-3, 40, 41, 43 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 6,143,069.

This reference teaches a hydraulic cement system comprising a powder comprising calcium aluminate; sodium polyphosphate; fly ash, which is a silicate; and water, which has a pH of 7. This system forms hydroxyapatite during hydration (col. 3, lines 19-22). The reference does not teach the volume percentages of hydroxyapatite formed, but since the taught system is identical to that claimed, it must produce a volume percent that falls within the claimed ranges, absent any showing to the contrary. The calcium aluminate of the reference is Refcon (col. 3, lines 5-10 and the examples). The technical data sheet for the Refcon teaches the cement contains at most 6 wt% silica; at least 55 wt% alumina; at most 2 wt% Fe_2O_3 , at most 34 wt% CaO, at most 1.5 wt% MgO and at most 0.4 wt% SO_3 . (ASTM C-114 calculates the chemical composition of a cement in terms of weight percentages). This composition corresponds to at

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most 7.68 mol% silica; at least 41.48 mol% alumina; at most 0.96 mol% Fe₂O₃, at most 46.62 mol% CaO, at most 2.88 mol% MgO and at most 0.38 mol% SO₃. Thus the taught calcium aluminate cement has a larger mole content of calcium than aluminum. The reference teaches the claimed system.

Applicants argue that claim 1 was amended to include the limitations of claim 4. No amendments have been made to claim 1. Therefore the rejection is maintained.

Claims 4, 5, 42, 44, 48-53 and 56-59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims are allowable for the reason given in the previous action.

Applicant's amendment necessitated the new grounds of objection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/
October 7, 2009

/C. Melissa Koslow/
Primary Examiner
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